

JUVENILE STURGEON SETLINE SURVEY

Raymond Schaffter, DFG

We conducted a full (21 stations) overnight setline survey during March and an abbreviated setline survey (six stations) in early June. This early sampling for juvenile sturgeon is an attempt to avoid the bait loss caused by adult Chinese mitten crabs that we experienced during our normal July to November sampling period in 1998. We caught few sturgeon in late summer and fall sampling in 1998 because of bait loss.

We caught 69 juvenile white sturgeon between 54 and 117 cm total length during the March survey. Bait generally remained on more than half of the hooks at 17 stations from the west Delta to Suisun Bay; bait loss was more severe (20% to 0% of hooks retained bait after overnight sets) at four stations in Carquinez Strait and San Pablo Bay. Surface specific conductance ranged from 135 to 270 mS/cm at the upstream locations where mitten crab activity was low and 510 to 1450 mS/cm downstream where mitten crab activity was severe. The average catch of 3.5 fish per setline was less than pre-mitten crab (1996 to 1997) catch of 5.1, and only two sturgeon were captured at the four sites where crab activity was considered severe.

We caught 34 juvenile white sturgeon at six sites between Broad Slough and Suisun Bay in June. The only crab activity was noted at a single station in north Honker Bay where about half of the hooks retained bait after an overnight set. This was also the location where almost half (15) of the juvenile sturgeon were caught in June. Surface specific conductance ranged from 225 to 4,180 mS/cm at sites sampled in June. We will conduct a full setline survey from Sherman Island to San Pablo Bay in mid-July.

DELTA SMELT UPDATE

Heather McIntire, DFG

Delta smelt spawned primarily in the south and central Delta and then remained in the area for an unusually long time. High densities near the SWP and CVP resulted in the "red light" take limit being exceeded in May and June. Exports were reduced and remained low through June. Delta smelt densities began to decline in the central

and south Delta near the end of June and pumping resumed with maximum exports being anticipated by 1 July. (For additional information see article on page 33, this issue.)

The first six of eight 20 mm surveys are completed and results are posted on the 20 mm homepage at <http://www2.Delta.dfg.ca.gov/data/20mm>. The DFG lab sorted, identified, and measured 80,734 fish within 24 hours of collection. Additional 20 mm sampling was requested by DWR and USBR in the south Delta, Victoria Canal, Grant Line Canal, and near Clifton Court Forebay. These results are also available on the 20 mm homepage.

Cache Slough was not a major spawning ground this year. Egg and Larval Entrainment Monitoring in Cache Slough will continue until 16 July. Twenty-seven delta smelt were identified from 20,495 fish collected.

YOUNG FISH INVESTIGATIONS

Lee Miller, DFG

Staff is currently working to complete several papers. One paper describes the distribution of *Gammarus daiberi*, an introduced amphipod, and amphipods of the genus *Corophium*. This paper is based on egg and larva sampling done from 1990 to 1993. Another paper describes factors affecting striped bass growth and mortality rates is partially complete. Staff striped bass biologists are reviewing the draft. A modeling analysis of striped bass cohort mortality through age three has been drafted and is in progress. It will be useful in evaluating the net efficiency of some of the monitoring surveys. Another paper describes changes in the diet of juvenile striped bass in relation to changes in food availability and fish size. A technical report on the inventory of fish survey data for shallow water habitats is being prepared for review.

The summer townet survey, which is used to index the abundance of young striped bass and delta smelt, started 5 July. The survey started two weeks later than in the recent past because of below average spring temperatures. This late starting date (and the 20 mm survey continuing through July) has postponed the start of the fall midwater trawl survey to 7 September.

IEP FIELD CREW RESCUES BOAT OWNERS AND BOAT

Chuck Armor, DFG

On 2 June, while trawling for emigrant salmon in the Sacramento River near Sacramento as part of an Inter-agency Ecological Program monitoring effort, DFG boat operator Dick Fenner and crew, Amy Buhlet (USFWS) and Mike Robinson (DWR), responded to a May Day distress call from the vessel *Ring-A-Ding-Ding*. The vessel was without power and was rapidly taking on water. Mr. Fenner, using his knowledge of the area, towed the vessel to a nearby sandbar where it was beached, thus saving it from sinking in the center of the river. While on the sandbar the stern of the vessel continued to take on water despite the efforts of the bilge pump and bailing by the crew and boat owners. Mr. Fenner determined the problem was a broken drive shaft and skillfully plugged the hole allowing the crew to complete bailing the boat out and thus keeping the vessel afloat. Throughout all of this, Mr. Fenner and his crew stayed with the vessel and its owners until Vessel Assist arrived. To quote from the letter received from the boat owners:

We want to be clear in indicating what the circumstances were. Though the water was not high, the flow was full and the current was strong. The water temperature was in the 50s. We had a full tank of gas—over 120 gallons. By ourselves, assisted only by our bilge pump, we could not have kept the boat from sinking. Once the water reached the gas tank and the engine—and it was rapidly on its way—in fact, the rear part of the engine was submerged, the boat would have sunk like a stone, stern first. We would have been in the water. And though we were both wearing life jackets, in the cold water, the strong current, with a number of major snags in the immediate vicinity, our lives very definitely would have been in jeopardy.

Mr. Fenner's quick response, his assessment of the situation, his skillful seamanship saved our boat and rescued us from a perilous situation. His clear thinking, familiarity with water craft, and on-the-spot inventiveness saved the stern of our boat from submerging once he has us out of harm's way. Throughout all this action, Mr. Fenner was polite, thoughtful, warm, and reassuring. Not once did he give even a hint that our debacle in any way inconvenienced him.

We owe the survival of our boat, and most likely ourselves, to the selfless, informed and effective action of Richard Fenner, Amy Buhlet and Mike Robinson.

Thank you does not convey the depth of our feelings or the sincerity of our respect. But it is all we have. Thank you, thank you, thank you.

Sincerely, David and Judy Covin

DFG'S DALE SWEETNAM HAS TRANSFERRED TO FORT BRAGG

Chuck Armor, DFG

Dale Sweetnam, leader of the Delta Smelt Project since its inception in 1992, is transferring to a California Department of Fish and Game (DFG) position in Fort Bragg to work on nearshore finfish and invertebrates. He will be conducting research to meet requirements of the Marinelifelife Management Act.

Dale played a major role in the DFG delta smelt status review which led to its listing as a State threatened species in 1993, and he has been instrumental in designing surveys to monitor smelt abundance and distribution, sometimes on a "real-time basis." For example, the 20 mm survey, which he initiated, has effectively been used to ascertain the distribution and abundance of young delta smelt in the spring and summer. This information, in turn, has been used to evaluate and modify water project operations to minimize "take" of delta smelt by the projects. Dale also has participated in diet studies and other investigations on habitat use by delta smelt. He has been a major player, through various assignments with the Inter-agency Ecological Program (IEP) and CALFED, in developing the delta smelt recovery plan and other concepts for smelt protection and habitat improvement.

Dale brought excellent computer and organizational skills to the IEP, and is noted for rapidly turning recently collected data into colorful, useful graphs on the IEP Internet site. Dale has earned the respect of all who have worked with him. Despite pressures that come with being on the delta smelt "hot seat" he has remained cool and congenial. His co-workers in the IEP wish Dale success in his new position.